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United States Patent [19][11] **Patent Number:** **5,428,729****Chang et al.**[45] **Date of Patent:** **Jun. 27, 1995**[54] **SYSTEM AND METHOD FOR COMPUTER AIDED SOFTWARE ENGINEERING**[75] Inventors: **Roger A. Chang**, Irving; **Andrew J. Smith**, Trophy Club; **Robert J. Torres**, Colleyville, all of Tex.[73] Assignee: **International Business Machines Corporation**, Armonk, N.Y.[21] Appl. No.: **811,775**[22] Filed: **Dec. 20, 1991**[51] Int. Cl.⁶ **G06F 19/00**[52] U.S. Cl. **395/153; 395/155; 395/159; 395/161**[58] Field of Search **395/153, 155, 159, 161, 395/700; 345/901, 1-2; 364/228.1, 221**[56] **References Cited****U.S. PATENT DOCUMENTS**

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[57] **ABSTRACT**

A data processing system supports preparation of a software application by coordinating the efforts of a metaprogrammer and a plurality of system users responsible to the metaprogrammer. The data processing system includes a plurality of workstations, each having a display and a user input device. Each of the workstations is connected to shared memory for access to data objects stored therein. One data object is a blank project container which includes a plurality of subject objects relating to phases in a product life for a software application. The metaprogrammer is authorized to replicate a blank project container to provide a project specified container available in shared memory to system users selected to work on a particular software application. The project specific container includes a plurality of subject objects relating to phases in a product life for the software application package. Data objects are stored in memory categorized within subject objects of the project container. An index is generated as data objects are created. Such an index is located with each subobject with each subject object. Lastly, private instances of the project container are generated relating to users. Each private instance includes a subset of the objects within the project container, selected on the basis of usefulness to the tasks assigned to this particular user.

6 Claims, 16 Drawing Sheets